PER LUNDEQUIST

Spatial Clustering and Industrial Competitiveness

Studies in Economic Geography

UPPSALA UNIVERSITET

Dissertation for the Degree of Doctor of Philosophy in Social and Economic Geography presented at Uppsala University in 2002
ABSTRACT


This thesis deals with the causes and effects of spatial clustering of similar and related economic activity. The relationship between spatial clustering and industrial competitiveness is analysed in a series of empirical studies, revolving around four research questions: How useful is an institutional approach in analyses of spatial clustering? Can the link between spatial clustering and industrial performance be empirically validated and measured by quantitative methods? In what sense does spatial clustering promote localised processes of learning and innovation? What role can industrial and regional policies play in promoting the type of localised processes emphasised in spatial clustering research?

It proves to be a rather complicated matter to measure the impact of spatial clustering on firm performance. In the case of export-oriented manufacturing firms in Sweden, the co-location of firms in a particular industry appears to have only a modest impact on export performance. However, when a more qualitative approach is applied, there is some evidence that spatial clustering can have a positive impact. A study of the Swedish music industry indicates that there is indeed a link between the concentration of music-related businesses in the Stockholm region and localised processes of learning and innovation. Such localised processes appear, in turn, to be linked to the ability to create and sustain industrial competitiveness. Finally, the thesis examines how the cluster concept has been put into practice in Swedish industrial and regional policies.

Key words: economic geography, cluster, industrial competitiveness, institutional thickness, learning, music industry, regional policy, Sweden, North East England

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LIST OF PUBLICATIONS

The studies in this doctoral thesis are presented in the following papers:


¹ The printed version of this paper which was published in the journal included some unfortunate errors in the graphical layout. Therefore it was decided to include the original manuscript in the thesis.
PREFACE AND ACKNOWLEDGEMENTS

Many people and several institutions have been important at different stages in the completion of this thesis, ranging from research colleagues in Sweden and abroad to the many interviewees involved.

First and foremost, I would like to extend my deepest thanks to my supervisor, Professor Anders Malmberg. Since I started this work in 1996, Anders has been a constant supporting and helping influence. I would like to thank him for his insightful comments, critical engagement, diligence and hard work and not least for his patience, generosity and friendship.

I would also like to thank the various people with whom I have collaborated in the writing of the thesis. They are: Daniel Hallencreutz, Göran Hallin, Bo Malmberg and Dominic Power. Thanks also to Staffan Larsson for all his support and advice, especially during my early years as a PhD student.

In terms of funding, I gratefully acknowledge the primary support of the “Swedish Model in Transition” programme – a joint project between Uppsala University and the National Institute for Working Life. This programme, directed by Professor Lars Magnusson, with its interdisciplinary approach to various dimensions of labour market transformation, has been an important stimulus to my work. Thanks also to all the doctoral students involved in Forksarskolan för Arbetsmarknadsfrågor, particularly to Henrik Lindberg for all his excellent work arranging workshops, seminars, etc.

The point of departure of this thesis is inspired by many sources but three in particular have been especially important. Firstly, a mid 1990s research project titled “Production Systems in the Nordic Countries” was important. Whilst the empirical studies that form the basis of this thesis were not in any formal sense a part of this project, it had a great influence on how the work was conceived and structured during my first years as a PhD student.

A second source of inspiration can be found in the policy field. My early years as a PhD student coincided with the implementation of EU Structural Fund programmes in Sweden, and my own work with evaluations of some of these programmes had an important influence. In relation to this work I spent a year at the University of Durham (UK), where my work was supervised by some of the members of the Political Economies of Geographical Change Research Group: notably Professor Ray Hudson and Professor Ash Amin. Thanks also to Angus Cameron, Antonio Correa, Tanya Gray, Jim Lewis and Fergus Lyon. I would also like to thank all those interviewed in the
course of UK work: particularly Magne Hauseng at the Tees Valley Joint Strategy Unit for introducing me to the practitioners’ view of European regional policies in a British context.

A third source of inspiration came from my part in a project on the Swedish music industry titled “Production of popular music: Local milieu and industrial competitiveness in the Swedish music industry”. The analytical framework used in the project, most notably Michael Porter’s cluster concept, came to inform much of the work contained in this thesis. In this project I have benefited a lot from close and productive collaboration with Daniel Hallencreutz. Tommy Berg and Johan Jansson have also contributed to the project. My involvement with the Swedish Cluster Focus Group (Klustergruppen), organised by NUTEK, sprang from this interest in cluster processes. I am thankful to all the members of the group for their stimulating discussions and insights.

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Uppsala, April 2002

Per Lundequist
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COMPREHENSIVE SUMMARY:
Spatial clustering and industrial competitiveness

1. Introduction

Quite contrary to what one would expect, current research stresses that the process of
globalisation is increasing rather than reducing the impact of geographical location on
influential exponent of the notion of economic localisation, the business strategist
Michael Porter (1998a: 90), has pointed out that:

> In a global economy – which boasts rapid transportation, high-speed communication, and
> accessible markets – one would expect location to diminish in importance. But the opposite
> is true. The enduring competitive advantages in a global economy are often heavily local,
> arising from concentrations of highly specialised skills and knowledge, institutions, rivals,
> related businesses, and sophisticated customers.

The above phenomenon has been well documented for more than a century in the
literature on industry agglomeration (for reviews, see e.g. Malmberg 1996, 1997).² This strand of research has focused on two trends that seem to be apparent in the
modern economy. One is related to the general tendency of people and economic
activity to concentrate in cities and industrial core regions. The other refers to the
fact that similar and related industries tend to co-locate – or cluster – in particular
places. This thesis focuses on the second trend, which has also recently been
labelled ‘spatial clustering research’ (Malmberg and Maskell 2002).

There are several reasons to consider the causes and effects of spatial clustering.
Basically, of course, it can contribute to our understanding of contemporary patterns and
processes of industrial transformation and regional development. Another reason is the
shift in industrial and regional policies towards adopting cluster-based economic
development strategies. This has been a dominant policy approach since the early 1990s
in OECD countries as well as in many countries in the developing world (Enright 2000,
OECD 1999, OECD 2001, Rosenfeld 2001). It has been argued that this policy trend
should be followed carefully, not least because it can provide something of a test
laboratory for examining the practices of many ideas and concepts developed in the
field of spatial clustering research.

² It is noteworthy that much of the theorising about localised processes and mechanisms that enhance the capacity of
people and firms operating in the same local milieu departs from Marshall’s (1890) three determinants of spatial
clustering: it provides a local pool of workers with specialised skills and expertise; it facilitates the growth of
specialized services; and it enables firms to benefit from technological spillovers.
1.1 Aim, research questions and structure of the thesis

The aim of this thesis is to examine the relationship between the spatial clustering of economic activity and industrial competitiveness. Along with an introductory conceptual paper (Lundequist 1998), the bulk of the thesis is composed of six empirical studies. The specific issues dealt with in these papers can be summarised in four broad questions (Q1-Q4; see also Table 1):

Q1: What is the potential of an institutional approach as a conceptual framework for analyses of the spatial clustering phenomenon?

Lundequist (1998) suggests that an institutional approach has the potential to offer a conceptual framework for increasing our knowledge about the causes and effects of spatial clustering. The paper emphasises the importance of getting the semantics right as regards the concept of ‘institutions’ (i.e. separating organisations from norms, values, regulations, etc.) if that potential is to be fulfilled.

Q2: Can the link between spatial clustering and industrial performance be empirically validated and measured by quantitative methods?

One of papers in the thesis deals with this specific issue by trying to measure the effect of localisation economies versus other types of economies on firm performance (Malmberg, Malmberg and Lundequist 2000). One key finding is that localisation economies do not seem to be as important in explaining firm performance as is claimed by theoretical propositions. The results indicate that internal scale economies and urbanisation economies are more important.

Q3: What sources of competitive advantages can be related to spatial clustering, and can the mechanisms that promote localised processes of learning and innovation be identified?

Three of the papers in this thesis draw on Porter’s (1990) cluster concept as an analytical framework for identifying and explaining sources of competitive advantage in the Swedish music industry (Hallencreutz et al. 2000, Hallencreutz et al. 2002, Hallencreutz and Lundequist 2002). Despite some limitations of the cluster concept as

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3 It should be noted that while institutional economics (North 1990, Hodgson 1988) formed a theoretical framework for the empirical analyses of spatial clustering in the beginning of the work on this thesis, the theoretical perspective has developed over time. Therefore, the connection between the theoretical perspective in the paper by Lundequist (1998) and the theoretical framework applied in the empirical case studies in the thesis is not always explicit. Nevertheless, it is noteworthy that many of the theoretical concepts that are referred to in the thesis such as institutional thickness and untraded interdependencies have to some extent been influenced by theoretical development in institutional economics (see for example Amin and Thrift 1994, Morgan 1997, Storper 1997).
an analytical framework (see Martin and Sunley 2001), these studies present various types of evidence for the proposed impact of spatial clustering of related and similar firms on the ability to create and sustain industrial competitiveness.

**Q4: What role can industrial and regional policies play in promoting the type of localised processes emphasised in spatial clustering research?**

The last two papers shift the focus to the regional and industrial policy field. One paper (Hallin and Lundequist 1999) examines the outcome of a European policy initiative in two regions that have suffered from a highly specialised industry structure. The question at issue is whether the partnership principle in the European Structural Funds is an effective form of economic governance that can form the basis for self-sustaining responses to economic (re)development. The second paper (Lundequist and Power 2002) deals with the question of how the cluster concept has been put into practice in different regional development initiatives in Sweden.

Table 1 presents an overview of the papers in the thesis. It shows how each of the papers relates to the questions above and gives some brief information concerning the specific aims and research questions, data sources and research methods, and geographical scale of analyses in each of the seven papers.

This summary provides an overview of contemporary spatial clustering research in order to outline the disciplinary context of the six empirically-oriented papers in this thesis (Q2-Q4). This overview is divided into two main sections. Section 2 presents the disciplinary context of four papers examining the relationship between the spatial clustering of economic activity and industrial competitiveness (see Q2 and Q3, Table 1). Section 3 revolves around two papers that are concerned with policy practices related to spatial clustering research.
<table>
<thead>
<tr>
<th>Question (Q1-Q4)</th>
<th>Title of the paper</th>
<th>Key words</th>
<th>Aim &amp; questions</th>
<th>Data and methodology</th>
<th>Geographical scale of analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Lundequist 1998: Innovation systems, institutional theory and economic geography.</td>
<td>Systems of innovation, institutional theory, agglomeration theory.</td>
<td>To explore the potential of an institutionalist approach to form an analytical framework for examining agglomeration economies.</td>
<td>Literature review, particularly the contributions by Lundvall (1992) and Edquist (1997) on national innovation systems and conceptual development by North (1990) in institutional economics.</td>
<td>1) National and regional</td>
</tr>
<tr>
<td>Q2</td>
<td>Malmberg, Malmberg and Lundequist 2000: Agglomeration and firm performance. Economies of scale, localisation and urbanisation among Swedish export firms.</td>
<td>Localisation economies, urbanisation and economies of scale.</td>
<td>To empirically assess the impact of various types of agglomeration economies on export performance.</td>
<td>Official industrial and trade statistics; linear regression model and location quotients</td>
<td>1) Administrative regions: municipalities (local) and counties (regional)</td>
</tr>
<tr>
<td>Q3</td>
<td>Hallencreutz, Lundequist and Malmberg 2000: Production of popular music: on the industrial geography of the Swedish music cluster.</td>
<td>Industrial cluster, production system, music industry.</td>
<td>How can the music industry be conceptualised and described as an industrial cluster? How extensive is the Swedish music cluster and who are the main actors involved?</td>
<td>Official industrial statistics, secondary sources such as professional journals, hagiographies, and newspapers as well as interviews.</td>
<td>1) National level</td>
</tr>
<tr>
<td>Q3</td>
<td>Hallencreutz, Lundequist and Malmberg 2002: Local embeddedness and international competitiveness – the case of the Swedish music cluster.</td>
<td>Industrial cluster, embeddedness, social networks, music industry.</td>
<td>To identify the most prominent mechanisms that underpin the sources of competitive advantage in the Swedish music industry.</td>
<td>Official industrial statistics, professional journals, about 80 interviews with company executives, creative managers, A&amp;R etc.</td>
<td>1) National level</td>
</tr>
<tr>
<td>Q3</td>
<td>Hallencreutz and Lundequist 2002: Making knowledge funky – Localised learning and SME competitiveness in the Swedish music cluster.</td>
<td>Industrial cluster, localised learning, knowledge community, music industry.</td>
<td>To examine the impact of industrial agglomeration on promoting localised processes of learning and innovation.</td>
<td>About 80 interviews with company executives, creative managers, A&amp;R, pressing plant managers etc.</td>
<td>1) National and regional level (the Stockholm region)</td>
</tr>
<tr>
<td>Q4</td>
<td>Lundequist and Power 2002: Putting Porter into Practice? Practices of regional cluster-building: evidence from Sweden.</td>
<td>Cluster policies, practices of the cluster approach</td>
<td>To examine the practical application of the cluster concept in regional development initiatives.</td>
<td>Survey of thirteen regional clusters, participant observation, interviews.</td>
<td>1) Local (municipality) and cross-regional areas</td>
</tr>
<tr>
<td>Q4</td>
<td>Hallin and Lundequist 1999: Partnerships for prosperous regions? The partnership principle in Structural Fund implementation: evidence from the UK and Sweden.</td>
<td>Institutional thickness, regional development, and practices of the partnership principle, Structural Funds.</td>
<td>To examine whether the partnership principle in European regional policies can stimulate institutional capacity-building.</td>
<td>About 40 interviews with officials representing public, semi-public, private, and voluntary sectors as well as evaluations, policy documents etc.</td>
<td>1) The Fyrstad region in the Southwest of Sweden (four municipalities) and the North East of England (five counties)</td>
</tr>
</tbody>
</table>
The theoretical overviews in section 2 and 3 are followed by brief outlines of the methodology, data sources, results and conclusions of the papers. Section 4, finally, closes with some methodological and conceptual considerations for spatial clustering research. In addition, some implications for regional and industrial policy are also identified in the light of the empirical findings presented in the thesis.

Before turning to the next section, it is important to consider the definition and use of one frequently occurring term in this thesis, clustering.

As indicated above, the thesis is primarily concerned with clustering as a spatial phenomenon. In accordance with the literature in this field of research, industry agglomeration, localisation and spatial clustering are used more or less synonymously to denote the phenomenon that similar or related firms and industries tend to assemble (i.e. concentrate, co-locate, agglomerate) in particular places. Hence, the suggested competitive advantages of spatial clustering are sometimes referred to as localisation economies or agglomeration economies. The thesis also introduces a functional dimension of clusters and clustering. This allows for the analysis of relations and other interdependencies across industries that do not necessarily fit into a spatially-defined territorial system. In addition to these two dimensions of the cluster concept, one may identify a third dimension that relates to the proliferation of policy programmes promoting cluster development. Here, the scale and scope of clusters are defined by a specific policy action. This could be called the policy dimension of the cluster concept, and it might or might not correspond to the spatial or functional dimension.
2. Spatial clustering theory and the need for empirical analysis

After a period of relative neglect, there has been something of a boom in research devoted to analysing and explaining the spatial clustering of economic activity over the last two decades (Lundequist 1998, Malmberg and Maskell 2002). One general explanation that has contributed to this boom is an increased interest in the region as a unit of analysis of both economic organisation and political intervention (Amin and Thrift 1994, Morgan 1997, Storper 1995). Another is the spread of the notion of industrial districts that emerged in the wake of the ‘post-Fordism debate’ in the 1980s, and the broad impact of the cluster concept as developed by Michael Porter in the early 1990s (Porter 1990). One conclusion that can be drawn from the three strands of research outlined below is that there has been a shift from approaches based on transaction efficiency in localised production systems towards an emphasis on how learning and innovation are created and disseminated in systems of interrelated economic activity.

2.1 Transaction efficiency and untraded interdependencies

One common denominator of various approaches that have emerged since the mid 1980s is the emphasis on economic benefits that arise from geographical proximity between similar and related economic activity.4 The emphasis on the importance of relatedness follows from arguments regarding the reorganisation of production proposed by economists and sociologists in the 1980s. Piore and Sabel’s (1984) now classic work “The Second Industrial Divide: possibilities for prosperity” identified the emergence of flexible specialisation as a new form of organising production. Flexible specialisation meant that large firms were seen to vertically disintegrate production to reduce scale ‘disadvantages’ and small firms increasingly built specialised networks of co-operation. In both cases geographical proximity and co-location were viewed as essential for achieving and maintaining the benefits of flexible specialisation.

Piore and Sabel’s observations were taken up by what is known as the California School, a group of North American geographers, which presented a theoretical framework for explaining the phenomenon of spatial clustering that has been quite influential. The California School was interested in explaining contemporary locational patterns of North American industries – a pattern that included the emergence of what

4 Some parts of this section draw on Lundequist (1998).
was termed “New Industrial Spaces” (Scott 1983, 1988, Storper and Walker 1989). Scott (2000b: 29) has in retrospect tried to capture why the development of these new spaces caught so much attention since the end of 1970s:

Indeed, at the very time when...many economic geographers were writing deeply pessimistic about crisis in older areas that have been dominated by Fordist manufacturing, a remarkable economic revival was becoming evident in certain other areas that were now developing space on the basis on post-Fordist industrial growth.

More specifically, the California School argued that there was a close relationship between the emergence of these new industrial spaces – most notably Silicon Valley, the M4 corridor, and the Third Italy – and the new post-Fordist industrial organisation. Furthermore, it was stressed that such newly industrialised areas were characterised by vertically disintegrated production networks based on highly flexible and specialised firms that co-located in order to minimise transaction costs (Storper 1995). Yet empirical studies have to a large extent failed to validate the theoretical proposition that extensive local transactions should account for the existence spatial clustering phenomenon (e.g. Appold 1995, Larsson and Lundmark 1991).

In the last decade, spatial clustering theory has witnessed a move from an emphasis on transaction costs towards an increased interest in knowledge spill-overs and other untraded interdependencies. It has, however, not been easy to systematically document that the spatial clustering of economic activity has an impact on localised patterns of learning and innovation beyond the level of case studies of individual regions (see Maskell and Malmberg 2002). In addition to a limited number of anecdotic examples (including Silicon Valley and the Third Italy), some of the most prominent empirical studies are Henry and Pinch’s work on the British motor sport industry (Henry and Pinch 2000, Pinch and Henry 1999), the work on high-tech SMEs located in Oxford and Cambridge by Keeble et al. (1999), and Saxenian’s (1994) work on Silicon Valley and Route 128. These studies share a concern with tracing the mechanisms by which knowledge is generated and circulated within localised production systems.

However, it has been argued that the more general conclusions that can be drawn from such case studies are limited in increasing our understanding of how spatial clustering promotes (or hinders, as in Saxenian’s Route 128 case) localised processes of learning.

5 Clearly, this shift is related to the notion of a rising knowledge-based, or learning, economy (Lundvall 1992, OECD 1996). Another reason for this re-orientation, of course, was that the explanatory framework developed by the California School provided little systematic explanation as to what exactly causes spatial binding of economic activities (Lagendijk 1997, Storper 1995).
and innovation. MacKinnon et al. (2002), for example, criticize Henry and Pinch’s work on the British motor sport industry for failing to fully consider the broader implications of their study in terms of whether their findings and insights are unique or more broadly representative. Maskell and Malmberg (2002) confirm this statement by concluding that existing empirical studies to a large extent have failed to provide evidence for the proposition that proximity between co-located firms leads to the development of relations that are important for the exchange of information and knowledge.

2.2 Diamond dynamics and industrial clusters

Among several approaches to the spatial clustering phenomenon, the cluster concept put forward by Michael Porter (1990) has been particularly influential in business, government and academia in the last decade. According to Porter, the competitive advantage of an industrial cluster is influenced by four interrelated determinants, graphically depicted as a ‘diamond model’ (see Figure 1): factor conditions, demand conditions, related and supporting industries, and firm strategy, structure and rivalry.

The simple logic behind the model, following Porter’s original writings (1990), is that a nation’s competitiveness depends on the competitiveness of the industries and companies forming its industrial clusters. The model tends to be applied at an industry level, but it has also been applied at the company or regional level. Sometimes the diamond itself has been interpreted as a cluster. However, although the diamond model has some elements in common with a cluster, the two are not equivalent. In this respect Porter (2000: 258) acknowledges that clusters make up one facet of the diamond model – related and supporting industries (see Figure 1) – but are best seen as a manifestation of the interactions among all four facets. This means, then, that the diamond model simply indicates how successful clusters work, or how clusters should work in order to become successful. It is also worth noting that what really matters is the quality of the determinants, not their quantity, which illustrates the qualitative nature of Porter’s approach.
Whilst it is beyond the scope of this summary to review the work of Porter in detail, it is important to point out some of its contribution to spatial clustering research. To identify internationally competitive industrial clusters, Porter applies *cluster charts*, which identify the producers of primary goods, specialty inputs, machinery for producing the primary goods, and associated services within a specific type of economic activity. The notion of inter-industry linkages as a driving force for competitiveness and the visualisation of cluster charts are some of Porter’s main contributions to spatial clustering research.

As compared with the strong emphasis on inter-firm relations of the California school, for example, Porter offers a conceptual framework for describing the systemic nature of industry. Hence, the geographical scale of analyses is clearly not confined, or contained within, any predetermined spatial entity. It is noteworthy that this is rather contrary to the emphasis on the efficiency and intensity of local inter-firm interactions in much of the empirical research done over the last few decades (e.g. McCann 1995, Larsson and Lundmark 1991). However, Porter argues that the geographic concentration of rivals, customers and suppliers tends to amplify innovative ability and competitiveness in a cluster even further. Thus, in accordance with the general theoretical propositions in spatial clustering research, Porter (1990: 157) argues that “…the process of clustering…works best when the industries involved are geographically concentrated.”
2.3 The case of the Swedish export industry

The first empirical paper in the thesis, “Agglomeration and firm performance: economies of scale, localisation and urbanisation among Swedish export firms” (Malmberg, Malmberg and Lundequist 2000), deals with a classic issue in spatial clustering research. This paper analyses the impact of various types economies on the export performance of Swedish manufacturing firms. In the analysis a distinction is made between localisation economies, urbanisation economies and internal economies of scale.

The approximately 10,000 exporting manufacturing firms that were included in the data set in the analysis account for more than three-quarters of total Swedish exports and for almost 90 per cent of overall manufacturing employment.6 Thus, one important contribution of this paper is to test existing theoretical propositions on comprehensive data material rather than drawing on limited case study material.

Data and methodology

In terms of the methodology and data in the paper, it is important to note that one problem in analysing export performance by region is that export value is not always registered by the plant where production takes place. The export value tends to be registered at the location of the legal unit (i.e. the firm). It might thus happen that the export value of goods produced at one location is attributed to a unit elsewhere. However, this problem is not as critical as it might seem since major manufacturing corporations normally are divided into a number of subsidiary companies (according to business area or function), each of which is included in the data base as a separate company. Furthermore, what should be taken into consideration when the results of this study are evaluated is that the data only include direct exports. This means that sales of goods to a domestic firm do not count as exports even though the domestic customer might in turn export it to the international market.

In order to test the effects of localisation, urbanisation and scale economies on export performance, a regression model is estimated. The dependent variable in the model is the export performance of the individual firm, measured as export value in Swedish kronor for each of the almost 10,000 firms in the sample. The basic argument for using export performance as an indicator of firm performance, or competitiveness, is that

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6 The paper relies on data that include all manufacturing firms (i.e. SIC 15-37) that were classified as active exporters in 1994 according to Statistics Sweden.
firms that are able to penetrate a foreign market must have some advantage, both over domestic firms and in relation to other firms competing for customers in that market.

Results and conclusions

In line with other recent studies in this field (e.g. Harrison et al. 1996), the results indicate that localisation economies are not as important as spatial clustering theory has claimed. The presence in the region of other exporting firms in the same industry has a marginal impact on the export performance of a firm. Instead, traditional scale economies, together with urbanisation economies, have a much larger effect on export performance. The study indicates that the localisation effect on export performance is 40-80 times smaller than the urbanisation effect and 50-100 times smaller than the effect of scale economies. Thus, one conclusion is that, while firms clearly recognise the role of urban public goods such as the quality of local labour markets, infrastructure and services (i.e. urbanisation economies), it is the old-fashioned type of economic geography – which is almost extinct today and in which economies of scale are emphasised – that has given the most accurate identification of the important factors shaping firm performance.

2.4 The case of the Swedish music industry

In recent years there has been a growing recognition of the economic importance of cultural-products industries such as music as well as crafts, fashion, multimedia, and motion pictures (e.g. Braczyk et al. 2000, European Commission 1998, Power 2002, Pratt 1997, Scott 2000a). Amongst European policy-makers there has been a marked interest in cultural-product industries in terms of business development and job creation. Since the publication of the EU Commission report “Culture, the Cultural Industries and Employment” (European Commission 1998; see also Hallencreutz and Power 2002a), EU member states have shown a growing political interest in the importance of cultural-product industries for the economy. In Sweden the music industry has been recognised as an increasingly competitive export industry (Forss 1999, see also Power and Hallencreutz 2002b).7 The international success of Abba, Roxette, Ace of Base, The Cardigans, Europe, Meja, Dr Alban, Pandora, Jennifer Brown, Robyn, and Dj Mendez,

7 The music business generates export income by selling goods (such as CDs, tapes, manufacturing equipment), by selling services (such as mixing in studios, producing music videos, licensing music) and through royalties. Forss (1999) has estimated that total export earnings in 2000 were SEK 4,582 million and that the annual growth rate between 1990 and 1997 was around 15 per cent. The total export of the music industry accounts for a large amount of money, but music is still rather insignificant as an export industry. Swedish exports of goods and services amounted to close to SEK 990 billion that year, and thus music accounted for less than 0.45 per cent of total Swedish export revenues.
to mention but a few, has been highlighted by the media and policy-makers as the most prominent ‘performance indicator’ of the international success of the music industry (Hallencreutz 2002, Hallencreutz and Lundequist 2001).\(^8\)

An underlying argument in the three papers on the music industry in this thesis is, however, that it is not only performing artists that have been internationally successful. More importantly, in the last decade a number of other activities have also contributed to the export performance of the industry. Today, for example, the Swedish music industry has presumably earned more significant international recognition for its production companies, video producers etc. than for its artists (Hallencreutz and Lundequist 2001). Therefore, the Swedish music industry should be viewed as an industrial system including a number of interrelated activities.

**Data and methodology**

A common criticism of studies in economic geography is their “tendency [...] to use highly disaggregated geographic units [but] highly aggregated industry units” (Enright 1993:9). However, even on a disaggregated (5-digit) level many industrial sectors tend to comprise activities not necessarily defined as belonging to the same production system or cluster. The standard industrial classification code for record companies (SIC 22214), for example, includes companies which produce talking books. This classification problem also holds for the industrial classification code for “Performing artists, producers of artistic and literary works” (SIC 92310) which includes many artistic companies that should be included in the music industry as well as companies that are not necessarily related to the music business.

Another example highlighting the problem of relying on SIC data is that while the Swedish Music Publisher’s Association (SMFF) lists about 70 publishing companies, there are about 650 companies with the SIC code (22150) for publishing companies. The problem of using standard industrial classification for capturing industrial systems is also noted by Porter (1998b: 79):

> Clusters rarely conform to standard industrial classification systems, which fail to capture many important actors and relationships in competition. Thus significant clusters may be obscured or even go unrecognised.

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\(^8\) In terms of studies on the music industry in Sweden in other social sciences, sociologists and media researchers are the most prominent (Wallis 1990, Burnett 1996). The Swedish MISC project (Music industries in small countries) studied how local and national identity and culture are affected by the increasing internationalisation and ownership concentration in the phonogram industry since the 1980s (Wallis 1990). Burnett (1990, 1992, 1996) focuses on the concentration of ownership and market share of the major multinational media companies and how it affects local production and consumption of popular music.
All in all, the weakness of using standard industrial classification highlights the need for thorough examination of official business registers and the like. It also highlights the importance of collecting different types of qualitative data when trying to define and delimit industrial systems or clusters. One such qualitative source of information that is central to the case study is face-to-face interviews conducted with some 80 individuals working in the music industry. The interviews covered two main topics: the interviewee’s career trajectory on the one hand and present occupation on the other.\textsuperscript{9}

The general purpose of the interviews was to gather information concerning the creation and development of industry-specific knowledge (codified and tacit) and to map the degree and nature of personal relationships (intra- and inter-organisational). The methodology, inspired by the study of the British motor sport industry by Henry and Pinch (see Henry \textit{et al.} 1996, Henry and Pinch 2000, Pinch and Henry 1999), was chosen in an attempt to delineate strategic knowledge (ideas, information, etc.) and the processes which create, sustain and circulate such knowledge amongst the different actors in the music industry. The interviews focused on individuals working in the industry (e.g. record companies, publishing companies and production companies) rather than on the artists. However, it is worth noting that the boundaries between these categories are often blurred as a number of individuals operating in the music business started their career as artists or musicians before moving on to “back stage work” for record companies, music publishers or industry organisations.

**Results and conclusions**

The first of the three papers in this thesis dealing with the Swedish music industry, “Production of popular music: on the industrial geography of the Swedish music cluster” (Hallencreutz, Lundequist and Malmberg 2000), focuses on two questions: How can the music industry be conceptualised and described as an industrial cluster? How extensive is the Swedish music cluster and who are the main actors involved? The paper is mainly concerned with identifying the actors involved in the production of popular music. By following Porter’s (1990; see also Sölvell \textit{et al.} 1991) categorisation of industrial clusters along four interconnected core sectors – including producers of 1) primary goods, 2) specialised inputs, 3) machinery and other equipment and 4) associated services – the empirical findings demonstrate that the Swedish music industry takes the shape of an industrial cluster. The Swedish music cluster seems to be

\textsuperscript{9} For a more detailed presentation of the structure and contents of these interviews, see Hallencreutz 2002.
highly competitive with respect to the specialised inputs (e.g. songwriters, producers etc.) as well as with respect to a number of associated services (e.g. video producers).

The aim of the second paper, “Local embeddedness and international competitiveness: the case of the Swedish music cluster” (Hallencreutz, Lundequist and Malmberg 2002), is to identify the mechanisms that can explain the competitive advantage of the Swedish music industry.\textsuperscript{10} In short, the paper suggests that Porter’s cluster approach is useful for pointing out the underlying mechanisms that appear to explain the origins and development of competitive advantage in a complex production system such as the music industry. Moreover, it is demonstrated that extending – or combining – the cluster concept with the notion of embeddedness (e.g. Grabher 1993, Granovetter 1985, Zukin and DiMaggio 1990) can provide an enhanced analytical framework for explaining the sources of the Swedish music industry’s competitive advantage.

One important empirical finding in the paper is that the existence of dense interpersonal networks has facilitated knowledge spillovers amongst actors with a stake in the cluster. The learning capability has been strengthened by a high level of staff circulation between the various sub-sectors that make up the music cluster (see also Hallencreutz 2002). Furthermore, the competitiveness of many firms (record companies, music publishers etc.) is explained, at least in part, by the large number of skilled staff with well-developed international networks. One conclusion is that further research needs to analyse in greater detail the role of social networks in explaining sources of competitive advantage in cultural-product industries such as the music industry.

This issue is further elaborated in the third paper on the Swedish music industry, titled “Making knowledge funky: localised learning and SME competitiveness in the Swedish music cluster” (Hallencreutz and Lundequist 2002). The general aim of this paper is related to the question whether the high proclivity of the music industry in Sweden to agglomerate in the Stockholm region is important for promoting localised processes of learning and innovation. The point of departure for the paper is the idea that the Swedish music industry should be perceived as a localised “knowledge community” (Henry and Pinch 2000) sustained by, and expanding through, the rapid production, application and dissemination of knowledge.

\textsuperscript{10} There is some overlap between the section “The Swedish music cluster: an empirical assessment” in the paper by Hallencreutz \textit{et al.} (2002) and the section “The core sectors of the Swedish music cluster” in Hallencreutz \textit{et al.} (2000). However, Hallencreutz \textit{et al.} (2002) has a stronger emphasis on ‘supporting institutions’ in the music cluster (i.e. educational institutions, third sector organisations, industry and workers’ organisations etc.). It should be noted that the contents of the introductory part of these two papers overlap to some extent.
The aim of the paper by Hallencreutz and Lundequist (2002) is to trace the creation and dissemination of strategic knowledge, information and skills essential for pursuing an ‘entrepreneurial’ career in the music business, as for example a producer, manager, A&R (i.e. Artist and Repertoire) or CEO (Chief Executive Officer), as well as for promoting the competitive success of individual firms. In relation to record companies, publishing companies, production companies – i.e. producers of core products in the music cluster – seven factors are identified as particularly crucial for the production and dissemination of such strategic knowledge: key people, lead firms, staff turnover between companies, joint career trajectories, meeting points (e.g. fairs, industry organisations, clubs), channels (e.g. professional journals, virtual communities) and educational institutions. The empirical findings indicate that processes and mechanisms that support the application of a common body of knowledge across a range of different economic activities (e.g. production companies, music publishers, record companies, etc.) have enhanced the growth of internationally competitive firms in the cluster. The empirical findings in the paper indicate that geographical proximity between firms related to the music industry in the Stockholm region has facilitated the recruitment of staff, monitoring of competitors, new firm formation, dissemination of new business ideas and the sharing of common meeting places (e.g. pubs and clubs) and also high accessibility to suppliers and other related services (video producers, mastering companies etc).

Another finding is that it seems inappropriate to focus solely on the firm level for identifying and explaining localised processes of knowledge creation and dissemination. A great deal of knowledge is generated and information exchanged in complex interpersonal networks between firms. The development of such networks in the music industry is a result of the fact that many professionals are free-lancers that are simultaneously contracted to a specific firm and/or loosely linked to one or several other employers. In conclusion, thus, this paper indicates that there is a relationship between the high concentration of music-related business in the Stockholm region and the ability to create and sustain international competitiveness.
3. Spatial clustering theory and the potential for policy practice

Recent theoretical developments in spatial clustering research have called attention to a number of important aspects of regional development processes. Some of the most prominent theoretical concepts that have emerged in this research field are the notions of institutional thickness (Amin and Thift 1994), the learning region (Morgan 1997) and the associational economy (Cooke and Morgan 1998). As MacLeod and Goodwin (1999: 512) put it, the institutional thickness framework, and other related concepts, have been developed as part of a growing academic and policy-related concern to interpret the key factors which appear to be providing certain regional spaces with “robust economic survival strategy in the ever harsher climate of globalisation” (see also Cooke 1995).

This section is divided into two main parts. The first part – section 3.1 and 3.2 – introduces and gives a brief outline of the paper examining how Porter’s cluster approach has been applied in regional policies in Sweden (Lundequist and Power 2002). The second part – section 3.3 and 3.4 – introduces and summarises the study on the partnership approach in European regional policies (Hallin and Lundequist 1999).

3.1 Cluster policies and regional development

In the last decade, the cluster concept has started to attract attention in regional and industrial polices (EC 1999, OECD 1999, OECD 2001). Although ideas of clusters have been in circulation for a decade in North American policy initiatives, the notion of clusters has only recently been taken seriously in Europe (Rosenfeld 2001). Nevertheless, since the end of the 1990s Porter’s cluster concept has been adopted by government agencies as a model for promoting regional development. Lagendijk and Cornford (2000) argue that by building a strong link between clusters and the notion of ‘competitiveness’, and by presenting graphic cluster maps, “it [Porter’s book on the competitive advantage of nations] paved the way for the successful career of ‘clusters’ as a regional development concept.”

Thus, Porter established the starting point for the application of the cluster concept by policy-makers, but it is through the ‘successive translations’ in industrial and regional policy that the concept has become a mobilising force (see also Lagendijk and Cornford 2000). One example of such a translation is the close association between firm networking and public-private partnerships on one hand and the cluster concept on the other (despite the fact that Porter has been critical of such policy initiatives). As the
cluster concept has become associated with the notion of networking, regional planners and policy-makers have applied the concept to existing regional development strategies (Lagendijk and Cornford 2000). Above all, interpretations of the cluster approach by planners and policy-makers have been as diverse as they have been popular (Raines 2001), or as Martin and Sunley suggest (2001: 30):

At one extreme are the ‘top down’ national mapping exercises that utilise selective types of data to identify, on an industry-by-industry basis, particular important localizations of specialized activities. At the other extreme are ‘bottom-up’ approaches that are only concerned with identifying clusters in a particular regional or local area, often in a highly qualitative, impressionistic way. In between are all sorts of combinations.

A recent study by Raines (2001) concerning the application of the cluster concept in regional policy-making confirms this diverse picture by demonstrating that in practice the cluster approach is applied in initiatives ranging from policies for supporting small-scale business networks without a particular sectoral focus to large-scale programmes targeting a specific, geographically limited industry.

### 3.2 The case of regional cluster-building in Sweden

In Sweden the cluster approach has gained a lot of ground in recent years both in the research and policy field.\(^{11}\) In the paper by Lundequist and Power (2002) – “Putting Porter into Practice? Practices of regional cluster building: evidence from Sweden” – the aim is to examine the use of Porter’s (1990) cluster concept in regional development initiatives. In terms of existing research in this field, it seems that whilst there has been a growing literature on the importance of spatial clustering for regional and industrial development, less attention has been given to the impact of the cluster concept in policy-making. Raines (2001: 1) has argued that, given the diversity of policies that at present apply the cluster concept, and given that it has been described as a paradigm shift in regional policy, “it is timely to review whether these new economic ideas have been reflected in innovative approaches to public interventions in regional development systems.”

In this thesis, the contribution to the field of research has been to examine how the cluster concept has been interpreted and put into practice in thirteen Swedish areas. Moreover, drawing on the results of this examination, the paper addresses questions

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\(^{11}\) One explanation is, of course, the fact that Sweden was one of the ten countries included in Porter’s (1990) influential study on the competitive advantage of nations (see also Sölvell et al. 1991).
concerning the mechanisms needed to put a cluster-based regional development strategy into practice.

**Data and methodology**

The paper draws on a study of thirteen regional cluster initiatives in Sweden by the Swedish Cluster Focus Group. The aim of this group, which included officials from national and regional authorities, was to link together experiences from different regional cluster initiatives.

This author was chosen at an initial stage (September 2000) as editor and co-author of a strategy document for this group titled “Innovative clusters in Sweden: practical lessons from cluster-building” (NUTEK 2001). The cases were deliberately chosen from different geographic locations, not least to show the variety of approaches undertaken in various regions. Another selection criterion was to highlight the sectoral diversity of cluster initiatives. Therefore, the study includes both regional ‘high-tech’ and ‘low-tech’ clusters (like biotech and woodworking).

**Results and conclusions**

One important result of the study is that the findings provide evidence that the cluster concept is used broadly, ranging from attempts to strengthen local SMEs to building regional ‘brands’. Despite this diversity, four main categories of how the cluster concept has been put into practice in different regional development initiatives were identified: industry-led initiatives to build competitiveness and competence in an existing industrial base; top-down public policy exercises in brand-building; visionary projects to produce an industry cluster out of ‘thin air’; temporal clusters that link into global and national systems of innovation and competitive advantage.

Practitioners, it appears, interpret the cluster concept as an analytical perspective for identifying and supporting activities that are not directly connected to a firm’s production, but which are significant for the competitiveness of individual firms. When the Swedish Cluster Focus Group tried to define the cluster concept, one definition appeared to recur frequently (NUTEK 2001: 14):

…the aim in thinking and acting in clusters is to set in motion the dynamic interplay between companies within a common strategic area of knowledge and the interplay between these companies and other parties concerned.

Thus, in the context of Sweden, and indeed the EU, cluster polices seems to move away from narrowly focused firm-based strategies to a more holistic approach to regional economic development (see also Enright 2000, Raines 2001). This is also the case in the
examples of regional cluster initiatives reported in the paper by Lundequist and Power (2002). In considering what amounts to a ‘policy shift’, the paper stresses that the recent emphasis on cluster-building has brought with it something of a new form of economic governance: one that emphasises the merging and synthesis of traditionally separate policy fields to form more systemic approaches to regional development; and one which recognises functional interconnectivities and systems that are more or less geographically concentrated and focuses on these as policy objectives to be worked with in a cooperative long-run dialogue involving a wide variety of actors and stakeholders.

In conclusion, this form of economic governance appears to have much in common with notions of the ‘associational economy’ (Cooke and Morgan 1998) or the emphasis that many authors have put on the role of ‘institutional thickness’ as a prerequisite for regional prosperity (Amin and Thrift 1994, 1995; see also Amin 1999, Amin and Hausner 1997).

3.3 Capacity-building and regional development

It has been suggested that one shortcoming with industrial and regional policies is the failure to support self-sustaining responses to changing economic situations. In this respect, Healy (1998) has asserted that the main weakness of contemporary European regional policy initiatives is that they usually tend to assume that the capabilities to develop such responses already exist (see also Amin and Thift 1994). In a similar vein, it has been pointed out that in many regional economies the barriers to innovation have as much to do with insufficient institutional capacity as with inferior technological competence. In the case of European regional polices, which aim to promote networking and innovation in Europe’s less favoured regions, experience has clearly demonstrated that this support may result in “little or nothing” (Cooke and Morgan 1998: 23) without any institutional capacity-building.

In economic geography the concept of institutional thickness in particular has been applied in an attempt to examine and assess policy initiatives to promote regional economic development (e.g. Gibbs et al. 2001, Healy 1998, MacLeod 1997, Raco 1998). In general terms, the concept of institutional thickness – as developed by Amin and Thrift in a series of influential papers (1993, 1994, 1995, 1997) – can be viewed as an analytical framework for interpreting the relationship between local and regional systems of economic governance and the ability of a region or locality to create and sustain industrial competitiveness.12

12 The term “systems of local governance” implies that “it is not just the formal agencies of elected local political institutions which exert influence over the pattern of life and economic make-up of local areas” (Painter and Goodwin
Institutional thickness, according to Amin and Thrift, refers both to the quantitative and the qualitative aspects of the institutional (or organisational) presence in a locality or a region. The first requirement, thus, is that there is a plethora of organisations present in the region. Secondly, a high level of interaction between the organisations is perceived as a crucial determinant. Interaction, both formal and informal, fosters the development of shared habits, routines, norms and practices. Thirdly, the structures of domination, coalition-building and collective representation need to be clearly defined.

In line with Amin and Thrift’s institutional thickness framework, there is now a body of policy literature in economic geography which shows that regional economic performance is related to the institutional capacity of particular places (Evans and Harding 1997). In the context of less favoured regions, some writers argue that in order to (re)create and sustain industrial competitiveness one possible path is to stimulate the development of institutional thickness. However, the concept of institutional thickness, although now widely accepted by economic geographers, is not without its problems and limitations. Empirical research has, for example, demonstrated that institutional thickness is not merely the sum of organisational support structures (i.e. ‘institutional presence’; see for example Hudson 1994, MacLeod 1997, Raco 1998, Braczyk et al. 1998). There are also some empirical studies which indicate that there is not a direct relationship between institutional thickness and regional economic performance. Hudson (1999; see also Hudson 1994) has in this respect argued that:

Institutional thickness per se is no guarantee of successful regional economic adaptation and innovation as it can constrain rather than facilitate processes of collective learning and change.

Another example of the non-linear relationship between institutional thickness and regional competitiveness is provided by Braczyk et al. (1998). They argue that historically achieved institutional thickness can become an obstacle to institutional adaptability and continuous learning and innovation since training, research and funding facilities tend to stabilise the traditional patterns of industrial development (Braczyk et al. 1998). It is argued that this is usually the case in previously competitive regions – such as many old industrial regions in Europe – which have a high level of technological competence in mature industrial sectors (Braczyk et al. 1998).

1996: 636) but also a wide range of other organisations such as central government, supra-national organisations, and semi-public, voluntary and private sector organisations. Together this set of different organisations and the formal and, more importantly, informal relations between them, constitute distinctive local systems of governance.
When considering the European regional policy context, the partnership approach in programming and implementation activities related to the EU Structural Funds has recently generated much debate in research drawing on the notions of institutional thickness and the associational economy. Bachtler and Taylor (1996; see also Kellher et al. 1999), for example, have argued that this approach can have an important impact on institutional capacity-building since it brings together different actors with a stake in regional economic development.

### 3.4 The case of the partnership approach in Structural Fund implementation

The paper by Hallin and Lundequist (1999) titled “Partnerships for prosperity? The partnership principle in Structural Fund implementation: evidence from the UK and Sweden” deals with the practices of the partnership approach in European regional policies. The question at issue is whether the partnership approach in the programming and implementation of the Structural Funds can stimulate the kind of institutional capacity-building that has been promulgated as a pre-requisite for regional economic growth (Amin and Thrift 1994, Cooke and Morgan 1998).

#### Data and methodology

The paper draws on a number of different sources of data ranging from interviews with actors involved in the programming and implementation of the Structural Funds to evaluations and policy documents. The paper focuses on the 1995-1999 phase of the Structural Funds in two old industrial regions, namely the North East of England and Fyrstad in southwest Sweden. According to the Structural Fund regulations, these two regions were defined as having so-called Objective 2 status (i.e. a higher unemployment rate than the EU average as well as a declining industrial base).

In the case of North East England, 39 face-to-face interviews were conducted between May 1998 and February 1999 with officials representing public, semi-public, private, and voluntary sector organisations in the implementation of the Structural Funds in the North East of England (see Appendix 2). The interviewees were asked to describe the different stages in an Objective 2 project application – from the initial project planning and development stage to the reception of an approval letter from the regional programme secretariat. Moreover, the interviewees were also asked more specific questions, for example, whether it was possible to identify any benefits and unexpected synergies from the current emphasis on partnership involvement. These interviews were ‘triangulated’ with interviews with policy expertise at EPRC (the European Policies Research Centre), CURDS (the Centre for Urban and Regional Development Studies).
and consultants (EKOS Ltd.) responsible for evaluations of the North East England Structural Fund programme. Another important source of information was participant observations at partnership meetings. The findings from the Fyrstad region draw on a series of studies between 1996 and 1999 by Hallin (Hallin 1995, Amcoff and Hallin 1999, Hallin and Lindström 1998, Hallin and Larsson 1998).

Results and conclusions

The empirical findings presented in the paper suggest that the partnership approach in the Fyrstad region has encouraged institutional capacity-building. It appears that the partnership approach has acted as an injection for the building of sustainable collaborative arrangements between various organisations with a stake in economic development. In North East England, on the other hand, the partnerships have to some extent been incorporated in the prevailing support structures of economic development. This has, for instance, resulted in a fragmented business support structure that seems to provide a weak basis for business development in a broad sense.

Comparing the institutional presence – or organisational density – in the two case study areas, Fyrstad appears to be institutionally ‘thin’ whereas the North East of England demonstrates rather ‘thick’ layers of organisations and established partnerships involved in business support and economic regeneration. Thus, the empirical findings in the paper appear to confirm the assertion by Hudson (Hudson 1994, 1999; see also Gibbs et al. 2001, MacLeod 1997, Raco 1998) that there is not necessarily a direct relationship between strong institutional presence and the evolution of an effective system of economic governance promoting regional economic development.

There are indications that capacity-building in the Fyrstad region has to a certain extent been stimulated by a strong focus on territorial integration. This explains, at least in part, the ability to ‘construct’ a concordant view on priorities amongst actors involved in the regional partnerships, in contrast to the culture of inter-regional rivalry and struggle over strategies that has been the case in North East England (Hallin 1995).

Moreover, in contrast to what the institutional thickness framework suggests, one reason why the partnership approach in Fyrstad seems to have been more successful in forming the basis for institutional capacity-building is its ‘institutional thinness’ – or organisational scarcity – as compared with North East England. In North East England, the high institutional presence of various organisations with a stake in economic development seems to be a barrier to the effective co-ordination of a single formula. Rather, organisationally-vested interests and strong intra-regional competition hindered
institutional capacity-building. This has discouraged the development of, for example, efficient support structures for business development.

Thus, in the words of Amin and Thrift (1994), in the case of North East England the partnership approach has formed a weak basis for the development of a sense of a “common industrial agenda”, and has not encouraged the evolution of a mutual awareness that organisations are involved in a “common enterprise”.
4. Concluding summary and implications

Spatial clustering is a central area of research for economic geographers as it relates to core concepts in economic geography, such as the role of space and place for industrial location and transformation. Despite the fact that this issue has been on the research agenda amongst different scholars for more than a century, it seems to be a commonly held opinion that our understanding of the causes and economic impact of spatial clustering is still limited. Malmberg and Maskell (2002: 431) confirm this picture:

> Even though the phenomenon of spatial clustering is indeed one of the main ‘classic issues’ of economic geography, and despite the fact that considerable research efforts have been made over the last decade, we have to acknowledge that its causes and effects remain elusive.

There are two questions that should be considered briefly before closing this summary. The first has to do with the difficulties concerning empirical validation of the suggested advantages of spatial clustering. The second question concerns some policy implications that can be raised in the light of this thesis.

4.1 Spatial clustering: the need for further conceptual and empirical work

It has recently been stressed that one shortcoming of spatial clustering research is the reliance on imprecise – or ‘fuzzy’ – concepts and the use of limited case study material in empirical analyses that try to verify theoretical propositions (Markusen 1999; see also Martin 2000).

Without doubt, many theoretical concepts that have emerged over the past decade such as industrial clusters, institutional thickness, localised learning and untraded interdependencies display a lack of conceptual clarity. The growing body of work drawing on the cluster concept in recent years has meant that it has become increasingly hard to categorically demarcate. There are now a number of different readings and interpretations of the cluster concept (Martin and Sunley 2001). One prominent concern that has been raised relates to the fact that terms with somewhat different meanings are used interchangeably, thus creating confusion. In this context it has been suggested that there is a need for more precise definitions, not least with respect to the geographical and sectoral scope of analysis (e.g. Enright 1996, Malmberg 2002, NUTEK 2001).

What lessons can be drawn from the empirical studies presented in this thesis concerning this matter? The empirical studies in this thesis suggest that there are three different dimensions to the cluster concept, related to space, function and policy (see
also NUTEK 2001 and Malmberg 2002). Making explicit the distinction between these three dimensions can help to establish a coherent terminology and contribute to a greater understanding of the dynamics of spatial clustering.

The paper on the Swedish export industry (see Q2, Table 1) examines the question whether there is a relationship between the degree of geographical concentration of a specific industry and the performance of individual firms in that industry. The empirical findings in the study indicate that the spatial clustering of similar firms is not as important as theoretical propositions tend to suggest. An interesting challenge for further research in this field is, of course, to examine whether these results are specific to the Swedish export industry. Nonetheless, the results of this study have implications for the other studies since they seem to falsify some of the key propositions put forward in spatial clustering theory. At the same time, the case study on the Swedish music industry (see Q3, Table 1) provides empirical support for the assumed impact of spatial clustering on the ability of individual firms to create and sustain industrial competitiveness. How can the differences in the results between these studies be explained?

One difference seems to relate to the question of measurability. It should be acknowledged that the premises for the study on the Swedish export industry (see Q2, Table 1) draw on a method which is based on ‘hard’ data sources, which may affect the results. In other words, it could be argued that the results derive, at least in part, from a methodological bias. Obviously, one pitfall of the study reviewed here is the use of location quotients based on SIC (Standard Industrial Classification) data for measuring localisation economies. Hence, one problem is that that industries rarely conform to SIC codes as specific industries in reality are composed of parts with different SIC codes. This problem becomes even more prominent in the context of spatial clustering research, which stresses the systemic nature of industrial production (see section 3.1).

Another explanation for the different results appears to be the assumption that clusters are geographically defined entities (i.e. have a geographical dimension). It is noteworthy that the results of the study on the Swedish export industry resonate well with several empirical studies that limit the scope of analysis to spatially bounded systems. There has been considerable research efforts directed at the intensity of local buyer-supplier relations and other types interdependencies (e.g. technological relations) between firms. However, few studies have been able to show that such relations are predominantly local (cf. Larsson 1998).
Turning to the case of the Swedish music industry (Q3), there is a stronger emphasis on clusters as sets of functionally interrelated industries and supporting institutions. This allows for the analysis of relations and other interdependencies across industries that may be important for identifying the sources of competitive advantage that do not necessarily fit into a spatially defined territorial system. In the context of Porter’s diamond model, highlighting the key determinants of a well-functioning cluster includes the need to incorporate a functional approach to the clustering phenomenon. There are few, if any, narrowly defined geographical clusters that incorporate the four determinants of the diamond model.

The case of the music industry provides evidence of the existence of processes and mechanisms that support the application of a common body of knowledge across a range of different economic activities and that have enhanced the growth of internationally competitive firms. There is empirical evidence that geographical proximity is important for interactive learning and knowledge spillovers, particularly in the Stockholm region, which has a high density of businesses related to the music industry. However, the empirical findings in the case study have implications for the preoccupation with spatial readings of the clustering phenomenon. In terms of the geographical level of empirical analyses, it is clearly demonstrated that the industrial system that makes up the Swedish music cluster is indeed connected well beyond the narrow regional scale.

4.2 Policy implications

Finally, I want to address some policy implications that arise from the thesis with respect to the current focus on the cluster approach in regional policies. Put simply, one may divide these policy implications into two types, those related to the cluster concept as an analytical tool and those that use the concept as a proactive tool for regional cluster-building.

The use of the cluster concept as an analytical tool for policy-makers and regional planners is obviously riddled with complexities. In addition to the above-mentioned pitfalls of simply extracting data from existing industrial statistics in order to define and delimit regional clusters in sectoral terms, there is the problem of spatial scale since clusters seldom conform to the boundaries of administrative regions. There is furthermore an urgent need for policy makers to discuss power structures, particularly when it is suggested that cluster-based economic development is the main route to regional prosperity today. Which cluster or clusters should be given priority? Who will make these decisions? There is a tendency amongst policy makers and practitioners to
claim that such problems can be avoided by undertaking rigorous cluster analyses. However, it should be noted that cluster analysis cannot prescribe the ways in which cluster policies are actually formed, as policy formation is politics, and politics is not something that can be shaped merely by scientific guidance.

Secondly, the use of the cluster approach as a proactive policy tool for promoting economic development is a complex matter, not least as concerns the role of industrial policies for strengthening ‘existing’ clusters. The music industry in Sweden today, for example, is a dynamic and competitive industrial cluster. However, industrial policies that explicitly support the music industry have in fact been reactive rather than proactive. It was only in the late 1990s, when policy-makers recognised that the music industry was a growing economic sector, that financial resources and more targeted sector initiatives were mobilised. Another policy implication, which also relates to the general focus of contemporary spatial clustering research, is the present emphasis on non-economic factors in regional cluster initiatives (e.g. brand-building, networking, etc.). Martin and Sunley (2001: 11) remind us of one possible pitfall when the impact of such factors on economic development is over-emphasised.

...[G]iven the current fashion for non-economic explanations, cluster studies often assume that ‘institutional thickness’ refers to non-firm institutions rather than examining the key institutions of firms and labour markets.

There is little doubt that research on spatial clustering, and its more recent connection to ideas about learning and other localised relational assets as key sources of competitive advantage, has encouraged the development of a challenging new research agenda. Many of the ideas and theoretical concepts that have been elaborated over the past decade are now attracting great interest in the policy field. Still, we still have a limited understanding of the spatial clustering phenomenon. In conclusion, there are thus dangers in the apparently rapid translation of theoretical concepts into industrial and regional policy initiatives, as there is a risk that research that is still needed for empirical validation will not be given the priority it deserves.
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economy*. Cambridge: Cambridge University Press.
Appendix 1 Interviewees: the case of the Swedish music industry

Andersson, Kjell, EMI, 22 May, 2000, Stockholm.
Andersson, Torbjörn, DCM, 17 May, 2000, Kista.
Bellander, Annika, Popwire, 30 May, 2000, Stockholm.
Blomqvist, Peter, Mediacord, 5 May, 2000, Solna.
Claeson, Andreas, EMA Telstar, 10 May, 2000, Stockholm.
Colegate, Roy, Cool Music, 2 May, 2000, Danderyd.
Grahl, Stefan, Denander och Grahl, 24 May, 2000, Stockholm.
Hammerman, Mats, Massproduktion, 25 May, 2000, Sundsvall.
Holmfred, Gert, Universal, 5 July, 2000, Solna.
Larsson, Olle, Cutting Room, 3 May, 2000, Solna.
Lidell, Pelle, Murlyn Music, 12 May, 2000, Solna.
Lindencrona, Carl., Svenska Musikförläggarföreningen, 22 May, 2000, Stockholm.
Ljunggren, Maria, Lionheart, 2 May, 2000, Stockholm.
Määä, Tanja, Saint PR, 6 February, 2002, Stockholm.
Olson, Claes, Musikindustrin, 8 September, 1999, Solna.
Rönnlund, Lars, IUC Hultsfred, 15 January, 2001, Stockholm
Schwen von, Carl, House of Kicks, 9 May, 2000 Solna.
Schüler, Håkan, Kinoeye, 4 May, 2000, Stockholm.
Stenmo, Tomas, Svenska IFPI, 28 April, 2000, Solna.
Yngen, Peter, MNW, 3 July, 2000, Solna.

13 In addition, the music industry case study draws on interviews conducted by Johan Jansson (18 interviews), Linda Rúnarsdóttir Svensk (15 interviews) and Tommy Berg (10+3 interviews); see Jansson (2000), Rúnarsdóttir Svensk (2000) and Berg (2001, 2002).
Appendix 2 Interviewees: the case of the partnership approach in Structural Fund implementation


Brear, L., European Officer, Tees Valley Joint Strategy Unit, 8 December, 1998, Middlesborough.

Brown, R., Research Fellow, European Policies Research Centre (EPRC), University of Stractclyde, 23 November, 1998, Glasgow.


Donnelly, S., European Officer, Tees Valley Joint Strategy Unit, 7 January, 1999, Middlesborough.

Donnelly, S., European Officer, Tees Valley Joint Strategy Unit, 29 October, 1998, Middlesborough.

Dunn, H., European Officer, Durham County Council, 14 January, 1999, Durham.


Fuller, T., Project Manager, Durham Business School, Business Informatics, 13 January, 1999, Durham.


MacReadie, J. (CEO) and Foster, A. (Senior Consultant), Ekos Ltd., 21 January, 1999, Glasgow.
Ovington, P., European Officer, Tees Valley Joint Strategy Unit, 7 January, 1999, Middlesborough.
Pike, A., Research Associate, Centre for Urban and Regional Development Studies, Newcastle University, 14 December, 1998, Newcastle.
Statham, R., Head of European programmes, University of Durham, 7 December, 1998, Durham.
Tennant, J., Corporate Services Manager, European Process Industries Competitiveness Centre (EPICC Ltd.), 12 January, 1999, Middlesborough.
Wilson, S., European Officer, Middlesbrough Borough Council, 16 December, 1998, Middlesbrough.
Woods, L. Regional Officer, Teesside University, 19 January, 1999, Middlesborough.